

Amendments to the Claims:

Claims 33-39 have been amended herein. Please note that all claims currently pending and under consideration in the above-referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

29. (Previously presented) A layered structure for use in manufacturing a cathode for a field emission display (FED) comprising a dielectric layer and a silicon layer formed over the dielectric layer, the silicon layer having an electropositive element diffused therein and extending down to an interface between the dielectric layer and the silicon layer.

30. (Previously presented) The structure of claim 29, wherein the electropositive element is selected from the group consisting of H, Li, Be, B, Na, Cs, Mg, Al, Ga, Ba, Rb, Ca, K, Sr, and In.

31. (Previously presented) The structure of claim 29, wherein the distribution of the electropositive element in the silicon layer is substantially even.

32. (Previously presented) The structure of claim 29, wherein the structure is provided in a liquid solution including one of Na and Cs.

33. (Currently amended) A field emission display comprising:
an anode;
a cathode;
the anode and the cathode sealed together and spaced apart to define an evacuated space
therebetween; and
a plurality of electron emitters ~~located on the~~ protruding from a surface of the cathode,
each of the emitters having tips for emitting electrons to the anode, the emitters
~~being made of~~ comprising silicon and having an electropositive element ~~both~~
distributed throughout a body of the emitters and at a surface ~~of the emitters~~
thereof.
34. (Currently amended) ~~A~~ The field emission display as in of claim 33, wherein the
~~distribution of the electropositive element in is~~ substantially evenly distributed throughout the
body of the emitters ~~is substantially even~~.
35. (Currently amended) ~~A~~ The field emission display as in of claim 33, wherein the
electropositive element is an element chosen ~~selected~~ from the group consisting of Group IA of
the periodic table.
36. (Currently amended) ~~A~~ The field emission display as in of claim 33, wherein the
electropositive element comprises Cs.
37. (Currently amended) ~~A~~ The field emission display as in of claim 33, wherein the
electropositive element is an element chosen ~~selected~~ from ~~a~~ the group consisting of H, Li, Be,
B, Na, Mg, Al, Ga, Ba, Rb, Ca, K, Sr, and In.
38. (Currently amended) ~~A~~ The field emission display as in of claim 33, wherein the
electropositive element is an element chosen ~~selected~~ from the group consisting of Group IIA of
the periodic table.

39. (Currently amended) ~~A~~ The field emission display as in of claim 33, wherein the electropositive element is an element chosen ~~selected from the group consisting of~~ Group IIIA of the periodic table.

40. (Previously presented) A cathode for a display device comprising:
a substrate;
a plurality of electron emitters on the substrate and made from silicon, the emitters having
a relatively wide base on the substrate and tapering to a tip away from the
substrate; and
an electropositive element diffused in the emitters so that the electropositive element
extends from the tip to the base, and wherein there is a significant amount of the
electropositive element at the base.

41. (Previously presented) A cathode as in claim 40, wherein the distribution of the electropositive element in the body of the emitters is substantially even.

42. (Previously presented) A cathode as in claim 40, wherein the electropositive element is chosen from Group IA of the periodic table.

43. (Previously presented) A cathode as in claim 40, wherein the electropositive element comprises Cs.

44. (Previously presented) A cathode as in claim 40, wherein the electropositive element is chosen from a group consisting of H, Li, Be, B, Na, Mg, Al, Ga, Ba, Rb, Ca, K, Sr, and In.

45. (Previously presented) A cathode as in claim 40, wherein the electropositive element is chosen from group IIA of the periodic table.

46. (Previously presented) A cathode as in claim 40, wherein the electropositive element is chosen from group IIIA of the periodic table.

47. (Previously presented) A cathode as in claim 40, the cathode further comprising an additional layer of silicon over the electron emitters to protect the electropositive element.

48. (Previously presented) The cathode of claim 40, wherein the concentration of the electropositive element decreases from the tip to the base.